

PTO/SB/21 (05-03)

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/655,827
	Filing Date	September 5, 2003
	First Named Inventor	Martin Geppert
	Art Unit	1632
	Examiner Name	not yet assigned
Total Number of Pages in This Submission	Attorney Docket Number	01269.US1

ENCLOSURES (Check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): A return-receipt postcard is enclosed.
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Firm or Individual name	Pharmacia & Upjohn Company	Edward F. Rehberg 34,703
Signature		
Date	5-07-04	

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FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)**180.00**

Complete if Known

Application Number	10/655,827
Filing Date	September 5, 2003
First Named Inventor	Martin Geppert
Examiner Name	not yet assigned
Art Unit	1632
Attorney Docket No.	01269.US1

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit card ☐ Money Order ☐ Other ☐ None

☒ Deposit Account:

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Pharmacia & Upjohn Company

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FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	
SUBTOTAL (1)			(\$) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims	Fee from below	Fee Paid
Total Claims	-20** = 0	X \$0.00	= \$0.00
Independent Claims	-3** = 0	X \$0.00	= \$0.00
Multiple Dependent		\$0.00	= \$0.00

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)**0.00**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	2051 65	Surcharge - late filing fee or oath	
1052 50	2052 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	1053 130	Non-English specification	
1812 2,520	1812 2,520	For filing a request for ex parte reexamination	
1804 920*	1804 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	1805 1,840*	Requesting publication of SIR after Examiner action	
1251 110	2251 55	Extension for reply within first month	
1252 420	2252 210	Extension for reply within second month	
1253 950	2253 475	Extension for reply within third month	
1254 1,480	2254 740	Extension for reply within fourth month	
1255 2,010	2255 1,005	Extension for reply within fifth month	
1401 330	2401 165	Notice of Appeal	
1402 330	2402 165	Filing a brief in support of an appeal	
1403 290	2403 145	Request for oral hearing	
1451 1,510	1451 1,510	Petition to institute a public use proceeding	
1452 110	2452 55	Petition to revive - unavoidable	
1453 1,330	2453 665	Petition to revive - unintentional	
1501 1,330	2501 665	Utility issue fee (or reissue)	
1502 480	2502 240	Design issue fee	
1503 640	2503 320	Plant issue fee	
1460 130	1460 130	Petitions to the Commissioner	
1807 50	1807 50	Processing fee under 37 CFR 1.17(q)	
1806 180	1806 180	Submission of Information Disclosure Stmt	180.00
8021 40	8021 40	Recording each patent assignment per property (times number of properties)	
1809 770	2809 385	Filing a submission after final rejection (37 CFR 1.129(a))	
1810 770	2810 385	For each additional invention to be examined (37 CFR 1.129(b))	
1801 770	2801 385	Request for Continued Examination (RCE)	
1802 900	1802 900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**180.00**

SUBMITTED BY

Name (Print/Type)	Edward F. Rehberg	Registration No. (Attorney/Agent)	34,703	Telephone	(269) 833-7829
Signature	<i>Edward F. Rehberg</i>	Date	5-07-04		

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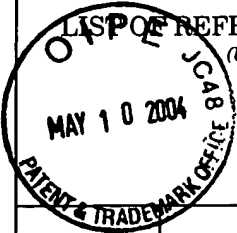
This collection of information is required by 37 CFR 1.17 and 1.27. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

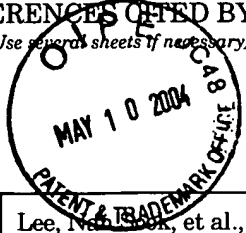
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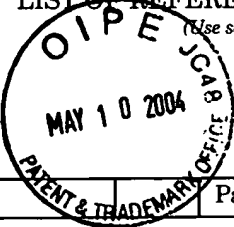
LIST OF REFERENCES CITED BY APPLICANT <i>(Use several sheets if necessary)</i>				Atty. Docket No. 01269		Serial No. 10/655,827	
				Applicant Martin Geppert			
				Filing Date Sept. 5, 2003		Group	

OFFICE
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U.S. PATENT DOCUMENTS								
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
	AA							
	AB							
	AC							
	AD							
	AE							
	AF							
	AG							
	AH							
	AI							
FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AJ							
	AK							
	AL							
	AM							
	AN							
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AO	Ambros, Victor, <i>"microRNAs: Tiny Regulators with Great Potential"</i> , Cell, Vol. 107, Pages 823-826, (Dec. 28, 2001).						
	AP	Babinet, Charles & Michel Cohen-Tannoudji, <i>"Genome engineering via homologous recombination in mouse embryonic stem (ES) cells: an amazingly versatile tool for the study of mammalian biology"</i> , An. Acad. Bras. Cienc., Vol. 73(3), Pages 365-383, (2001).						
	AQ	Bargmann, Cornelia I., <i>"High-throughput reverse genetics: RNAi screens in <i>Caenorhabditis elegans</i>"</i> , Genome Biology, Vol. 2(2), Pages 1005.1-1005.3, (2001).						
	AR	Bass, Brenda L., <i>"Double-Stranded RNA as a Template for Gene Silencing"</i> , Cell, Vol. 101(3), Pages 235-238 (April 28, 2000).						
	AS	Baulcombe, David C., <i>"Unwinding RNA Silencing"</i> , Science, Vol. 290, Pages 1108-1109, (Nov. 10, 2000).						
	AT	Bernstein, Emily, et al., <i>"Role for a bidentate ribonuclease in the initiation step of RNA interference"</i> , Nature,						

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		Applicant Martin Geppert	
		Filing Date Sept. 5, 2003	Group
		Vol. 409, Pages 363-366, (Jan. 18, 2001).	
	AV	Brummelkamp, Thijn R., et al., "A System for Stable Expression of Short Interfering RNAs in Mammalian Cells", Science, Vol. 296, Pages 550-553, (April 19, 2002).	
	AW	Cogoni, Carlo and Giuseppe Macino, "Post-transcriptional gene silencing across kingdoms", Current Opinion in Genetic Development, Vol. 10, Pages 638-643, (2000).	
	AX	de Angelis, Martin Hrabé, et al., "Genome-wide, large-scale production of mutant mice by ENU mutagenesis", Nature Genetics, Vol. 25, Pages 444-447, (Aug. 2000).	
	AY	de Angelis, Martin Hrabé and Mark Strivens, "Large-scale production of mouse phenotypes: The search for animal models for inherited diseases in humans", Briefings in Bioinformatics, Vol. 2(2), Pages 170-180, (May 2001).	
	AZ	Eggan, Kevin, et al., "Male and female mice derived from the same embryonic stem cell clone by tetraploid embryo complementation", Nature Biotechnology, Vol. 20, Pages 455-459, (May 2002).	
	BA	Eggan, Kevin, et al., "Hybrid vigor, fetal overgrowth, and viability of mice derived by nuclear cloning and tetraploid embryo complementation", PNAS, Vol. 98(11), Pages 6209-6214, (May 22, 2001).	
	BB	Elbashir, Sayda M., et al., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells", Nature, Vol. 411, Pages 494-498, (May 24, 2001).	
	BC	Fire, Andrew, "RNA-triggered gene silencing", Trends in Genetics, Vol. 15(9), Pages 358-363, (Sept. 1999).	
	BD	Fire, Andrew, et al., "Potent and specific genetic interference by double-stranded RNA in <i>Caenorhabditis elegans</i> ", Nature, Vol. 391, Pages 806-811 (Feb. 19, 1998).	
	BE	Fraser, Andrew G., et al., "Functional genomic analysis of <i>C. elegans</i> chromosome I by systematic RNA interference", Nature, Vol. 408, Pages 325-330 (Nov. 16, 2000).	
	BF	Fussenegger, Martin, "The Impact of Mammalian Gene Regulation Concepts on Functional Genomic Research, Metabolic Engineering, and Advanced Gene Therapies", Biotechnology Progress, Vol. 17, Pages 1-51, (2001).	
	BG	Hannon, Gregory J., "RNA interference", Nature, Vol. 418, Pages 244-251, (July 11, 2002).	
	BH	Kasschau, Kristin D. and James C. Carrington, "A Counterdefensive Strategy of Plant Viruses: Suppression of Posttranscriptional Gene Silencing", Cell, Vol. 95, Pages 461-470, (Nov. 13, 1998).	
	BI	Kawasaki, Hiroaki, et al., "Identification of genes that function in the TNF- α -mediated apoptotic pathway using randomized hybrid ribozyme libraries", Nature Biotechnology, Vol. 20, Pages 376-380, (April 2002).	
	BJ	Ketting, René F., et al., "mut-7 of <i>C. elegans</i> , Required for Transposon Silencing and RNA Interference, Is a Homolog of Werner Syndrome Helicase and RNaseD", Cell, Vol. 99, Pages 133-141, (Oct. 15, 1999).	
	BK	Knight, Scott W. and Brenda L. Bass, "A Role for the RNase III Enzyme DCR-1 in RNA Interference and Germ Line Development in <i>Caenorhabditis elegans</i> ", Science, Vol. 293, Pages 2269-2271, (Sept. 21, 2001).	
	BL	Kolb, Andreas F., "Genome Engineering Using Site-Specific Recombinases", Cloning and Stem Cells, Vol. 4(1), Pages 65-80, (2002).	
	BM	Lagos-Quintana, Mariana, et al., "Identification of Novel Genes Coding for Small Expressed RNAs", Science, Vol. 294, Pages 853-858, (Oct. 26, 2001).	
	BN	Lau, Nelson C., et al., "An Abundant Class of Tiny RNAs with Probable Regulatory Roles in <i>Caenorhabditis elegans</i> ", Science, Vol. 294, Pages 858-862, (Oct. 26, 2001).	

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	BO	Lee, In-Sook, et al., "Expression of small interfering RNAs targeted against HIV-1 rev transcripts in human cells", Nature Biotechnology, Vol. 19, Pages 500-505, (May 2002).	
	BP	Lee, Rosalind C. and Victor Ambros, "An Extensive Class of Small RNAs in <i>Caenorhabditis elegans</i> ", Science, Vol. 294, Pages 862-864, (Oct. 26, 2001).	
	BQ	Li, Wan Xiang and Shou Wei Ding, "Viral suppressors of RNA silencing", Current Opinion in Biotechnology, Vol. 12, Pages 150-154, (2001).	
	BR	Lin, Rueyling and Leon Avery, "Policing rogue genes", Nature, Vol. 402, Pages 128-129, (Nov. 11, 1999).	
	BS	Lipardi, Concetta, Qin Wei and Bruce M. Paterson, "RNAi as Random Degradative PCR: siRNA Primers Convert mRNA into dsRNAs that are Degraded to Generate New siRNAs", Cell, Vol. 107, Pages 297-307, (Nov. 2, 2001).	
	BT	Llave, Cesar, Kristin D. Kasschau and James C. Carrington, "Virus-encoded suppressor of posttranscriptional gene silencing targets a maintenance step in the silencing pathway", PNAS, Vol. 97(24), Pages 13401-13406, (Nov. 21, 2000).	
	BU	Maeda, Ikuma, et al., "Large-scale analysis of gene function in <i>Caenorhabditis elegans</i> by high-throughput RNAi", Current Biology, Vol. 11(3), Pages 171-176, (2001).	
	BV	Misra, Ravi P., et al., "Generation of single-copy transgenic mouse embryos directly from ES cells by tetraploid embryo complementation", BMC Biotechnology, Vol. 1(12), Page 1-9, (Dec. 18, 2001).	
	BW	Miyagishi, Makoto and Kazunari Taira, "U6 promoter-driven siRNAs with four uridine 3'-overhangs efficiently suppress targeted gene expression in mammalian cells", Nature Biotechnology, Vol. 19, Pages 497-500, (May 2002).	
	BX	Paddison, Patrick J., et al., "Short hairpin RNAs (shRNAs) induce sequence-specific silencing in mammalian cells", Genes & Development, Vol. 16, Pages 948-958, (2002).	
	BY	Paul, Cynthia P., et al., "Effective expression of small interfering RNA in human cells", Nature Biotechnology, Vol. 29, Pages 505-508, (May 2002).	
	BZ	Romano, Nicoletta and Giuseppe Macino, "Quelling: transient inactivation of gene expression in <i>Neurospora crassa</i> by transformation with homologous sequences", Molecular Microbiology, Vol. 6(22), Pages 3343-3353, (1992).	
	CA	Ruvkun, Gary, "Glimpses of a Tiny RNA World", Science, Vol. 294, Pages 797-799, (Oct. 26, 2001).	
	CB	Sharp, Phillip A., "RNA interference - 2001", Genes & Development, Vol. 15, Pages 485-490, (2001).	
	CC	Sijen, Titia, et al., "On the Role of RNA Amplification in dsRNA-Triggered Gene Silencing", Cell, Vol. 107, Pages 465-476, (Nov. 16, 2001).	
	CD	Sui, Guangchao, et al., "A DNA vector-based RNAi technology to suppress gene expression in mammalian cells", PNAS, Vol. 99(8), Pages 5515-5520, (April 16, 2002).	
	CE	Tabara, Hiroaki, et al., "The rde-1 Gene, RNA Interference, and Transposon Silencing in <i>C. elegans</i> ", Cell, Vol. 99, Pages 123-132, (Oct. 15, 1999).	
	CF	Wianny, Florence and Magdalena Zernicka-Goetz, "Specific interference with gene function by double-stranded RNA in early mouse development", Nature Cell Biology, Vol. 2, Pages 70-75, (Feb. 2000).	
	CG	Zamore, Phillip D., "RNA interference: listening to the sound of silence", Nature Structural Biology, Vol. 8(9),	

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	<p>Filing Date Sept. 5, 2003</p>	<p>Group</p>
<p>Pages 746-750, (Sept. 2001).</p>		
<p>Examiner</p>	<p>Date Considered</p>	